

CLAIMS

1. - 13. (cancelled)

14. (Previously Presented) A method for implementing pressure assisted electrostatic chucking, the method comprising:

placing a wafer onto an electrostatic chucking pedestal;

introducing a supply of backside carrier gas to a backside of said electrostatic chucking pedestal, said electrostatic chucking pedestal having a plurality of gas channels formed through a top surface thereof;

monitoring a pressure between said wafer and said electrostatic chucking pedestal to determine whether a threshold level of chucking force exists;

decoupling said backside carrier gas from said backside of said electrostatic chucking pedestal and coupling said backside of said electrostatic chucking pedestal to a vacuum supply whenever the actual level of chucking force is less than said threshold level of chucking force, wherein said plurality of gas channels are configured to facilitate vacuum assisted chucking of the wafer, during which vacuum assisted chucking an electrostatic chucking voltage remains applied to the electrostatic chucking pedestal, wherein the vacuum assisted chucking is implemented prior to performing a wafer processing operation for which the wafer is chucked; and

decoupling said vacuum supply from said backside of said electrostatic chucking pedestal and coupling said backside of said electrostatic chucking pedestal to said backside carrier gas whenever the actual level of chucking force meets said threshold level of chucking force.

15. (original) The method of claim 14, further comprising introducing a front side supply of gas in conjunction with said vacuum supply.

16. (cancelled)

17. (original) The method of claim 14, further comprising increasing an electrostatic chucking voltage applied to said electrostatic chucking pedestal whenever said coupling of said backside of said electrostatic chucking pedestal to said vacuum supply is insufficient to create said threshold level of chucking force.

18. (original) The method of claim 17, further comprising determining a defective wafer condition whenever said coupling of said backside of said electrostatic chucking pedestal to said vacuum supply is insufficient to create said threshold level of chucking force and said electrostatic chucking voltage exceeds a maximum established value thereof.

19. (cancelled)

20. (cancelled)